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NEWS 20	SEP 18	Support for STN Express, Versions 6.01 and earlier, to be discontinued
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NEWS 22	SEP 26	WPIDS, WPINDEX, and WPIX coverage of Chinese and and Korean patents enhanced
NEWS 23	SEP 29	IFICLS enhanced with new super search field
NEWS 24	SEP 29	EMBASE and EMBAL enhanced with new search and display fields
NEWS 25	SEP 30	CAS patent coverage enhanced to include exemplified prophetic substances identified in new Japanese-language patents
NEWS 26	OCT 07	EPFULL enhanced with full implementation of EPC2000
NEWS 27	OCT 07	Multiple databases enhanced for more flexible patent number searching

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         15595 EPOXIDATION
           254 EPOXIDATIONS
         15629 EPOXIDATION
                 (EPOXIDATION OR EPOXIDATIONS)
         27437 EPOXIDN
           601 EPOXIDNS
         27535 EPOXIDN
                 (EPOXIDN OR EPOXIDNS)
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                (EPOXIDATION OR EPOXIDN)
         818459 CATALYST
         814741 CATALYSTS
        1048370 CATALYST
                (CATALYST OR CATALYSTS)
         378012 "TI"
           1351 "TIS"
         379031 "TI"
                ("TI" OR "TIS")
            262 "MWW"
              1 "MWWS"
            263 "MWW"
                ("MWW" OR "MWWS")
             58 "TI-MWW"
                ("TI"(W)"MWW")
         287451 PRECURSOR
         134313 PRECURSORS
         378508 PRECURSOR
                (PRECURSOR OR PRECURSORS)
          79194 HYDROTHERMAL
              5 HYDROTHERMALS
          79197 HYDROTHERMAL
                (HYDROTHERMAL OR HYDROTHERMALS)
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=> d l1 1-5 abs ibib

L1   ANSWER 1 OF 5  CAPLUS  COPYRIGHT 2008 ACS on STN
AB   A novel titanosilicate with the MWW topol., Ti-MWW,
     has been prepared by direct hydrothermal synthesis using boric
     acid as a structure-supporting agent, and also by post-incorporation of
     tetrahedral Ti species into MWW silicalite through controlled structural
     conversions between 3-dimensional crystalline MWW silicalite and its lamellar
     precursor.  The catalytic properties of Ti-MWW
     have been compared with those of conventional titanosilicates.
     Hydrothermally synthesized Ti-MWW proves to be more
     effective in the epoxidn. of linear alkenes including
     functionalized ones, and also exhibits considerable activity for
     cycloalkenes using hydrogen peroxide as oxidant.  Postsynthesized
     Ti-MWW, almost free of boron, catalyzes the alkene
     epoxidn. more effectively as a result of the tetrahedral Ti
     species different from those resulting from the direct synthesis, which
     turns out to be the most active titanosilicate catalyst for
     epoxidn. so far.  The activity of Ti-MWW in
     the ammoximation of cyclohexanone is superior to that of TS-1, which is
     being industrially used.  A new interlayer-expanded structure analogous to
     MWW has been prepared in the form of titanosilicate and denoted by Ti-YNU-1.
     Ti-MWW is further converted by phase delamination into a
     thin sheet material.  Ti-YNU-1 and delaminated Ti-MWW
     catalyze the epoxidn. of bulky cycloalkenes more actively than
     Ti-MWW or large pore titanosilicates as well as
     mesoporous Ti-MCM-41.
ACCESSION NUMBER:        2008:428104  CAPLUS
TITLE:                   Ti-MWW and related materials as
                         efficient oxidation catalysts
AUTHOR(S):               Tatsumi, Takashi; Wu, Peng; Fan, Weibin
CORPORATE SOURCE:        Chemical Resources Laboratory, Tokyo Institute of
                         Technology, 4259 Nagatsuta, Midori-ku, Yokohama,
                         226-8503, Japan
SOURCE:                  Studies in Surface Science and Catalysis (2007),
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170B(From Zeolites to Porous MOF Materials), 1051-1058
CODEN: SSCTDM; ISSN: 0167-2991
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
AB Ti-MWW was prepared by acid treatment and calcination on a lamellar precursor which was synthesized under dynamic hydrothermal crystallization conditions using piperidine as a template, and boric acid as a structure-supporting agent. The crystallization time is shortened by adding Ti-MWW seeds and increasing stirring rate. UV-visible spectra show that the precursor contains tetrahedral and octahedral Ti species. Calcination of the precursor results in a partial condensation of the octahedral Ti to form the anatase phase. The octahedral Ti species belong to a kind of extra framework Ti, which can be removed easily by the acid treatment in a short time. The calcined Ti-MWW contains the anatase when the acid-treated time is too long. The characteristic IR band at 960 cm-1 is not observed for the Ti-MWW precursor, but it appears in the samples treated by acid. Epoxidn. of allyl alc. with H2O2 on Ti-MWW was studied. Ti-MWW with Si/Ti ratio of 20 and acid treatment for 12 .apprx. 16 h is more effective. The conversation of allyl alc. is 88.7%, and the selectivity for glycidol is 99% under the reaction conditions of 333 K and 30 min, but the catalytic activity of Ti-MWW decreases when the acid-treated time is too long.
ACCESSION NUMBER: 2006:397985 CAPLUS
DOCUMENT NUMBER: 146:69422
TITLE: Epoxidation of allyl alcohol to glycidol on Ti-MWW molecular sieves
AUTHOR(S): Chen, Xiaohui; Fan, Zhiyong; Quan, Xia; Wei, Kemei
CORPORATE SOURCE: National Engineering Research Center of Chemical Fertilizer Catalyst, College of Chemistry and Chemical Engineering, Fuzhou University, Fuzhou, 350002, Peop. Rep. China
SOURCE: Cuihua Xuebao (2006), 27(3), 285-290
CODEN: THHPD3; ISSN: 0253-9837
PUBLISHER: Kexue Chubanshe
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

L1 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
AB A novel post-synthesis method has been proposed to prepare a highly efficient titanosilicate catalyst with the MWW topol., Ti-MWW. The so-called reversible structural conversion method is based on a structural interchange between 3-dimensional MWW silicate and its lamellar precursor together a simultaneous incorporation of titanium through the treatment with an aqueous solution of titanium source and cyclic amine. This method overcomes the restriction problem between pore windows and titanium precursor probably encountered in the usual method using TiCl4 vapor at elevated temps. The catalytic properties of postsynthesized Ti-MWW have been investigated by comparing with hydrothermally synthesized one as well as the conventional titanosilicates of TS-1 and Ti-Beta in the epoxidn. of various alkenes with hydrogen peroxide. Ti-MWW proves to be more effective in the epoxidn. of both simple and functionalized alkenes. Particularly, the novel postsynthesis method of a reversible structural conversion incorporates more active Ti species into the framework than the conventional hydrothermal

synthesis, leading to the most active epoxidn. titanosilicate catalyst so far. Ti-MWW has been further delaminated into thin sheet material which possesses an extremely open and accessible surface area but maintains the basic structure of zeolite. Delaminated Ti-MWW catalyzes the epoxidn. of bulky substrates of various cycloalkenes more actively than other titanosilicates including mesoporous Ti-MCM-41.

ACCESSION NUMBER: 2005:418382 CAPLUS
DOCUMENT NUMBER: 144:150676
TITLE: MWW-type titanosilicate: novel preparation and high efficiency in the epoxidation of various alkenes
AUTHOR(S): Wu, P.; Fan, W.; Nuntasri, D.; Tatsumi, T.
CORPORATE SOURCE: Graduate School of Engineering, Yokohama National University, Hodogayaku, Yokohama, 2408501, Japan
SOURCE: Studies in Surface Science and Catalysis (2004), 154C(Recent Advances in the Science and Technology of Zeolites and Related Materials), 2581-2588
CODEN: SSCTDM; ISSN: 0167-2991
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
AB MWW type titanosilicate, Ti-MWW, has been synthesized by the dry-gel conversion (DGC) method, and its physicochem. properties and catalytic performance in the liquid-phase epoxidn. of alkene have been compared with that of hydrothermally synthesized (HTS) Ti-MWW. The roles in the crystallization of silica source, alkali cation, cyclic amine as a structure-directing agent (SDA), and boric acid structure-supporting agent have been investigated. The crystallization of Ti-MWW did not occur for the dry gels free of boric acid, but was feasible at a Si/B molar ratio as high as 12 in marked contrast to the ratio of 0.75 required in the hydrothermal synthesis. The sodium as a mineralization agent was not necessary and on the contrary inhibited the crystallization particularly at a high content. The seeding technique using deboronated MWW effectively accelerated the crystallization speed and reduced the amount of boric acid required. As-synthesized Ti-MWW-DGC lamellar precursors contained both tetrahedral and octahedral species but the latter was selectively removed by acid treatment. Ti-MWW-DGC catalysts showed lower intrinsic activity than Ti-MWW-HTS in the epoxidn. of hex-1-ene with hydrogen peroxide probably because the crystal size of the former was 10-20 times as large as that of the latter and then imposed significant diffusion problems for both the substrates and the products.

ACCESSION NUMBER: 2005:224837 CAPLUS
DOCUMENT NUMBER: 142:323629
TITLE: Synthesis of Ti-MWW by a dry-gel conversion method
AUTHOR(S): Wu, Peng; Miyaji, Takayuki; Liu, Yueming; He, Minyuan; Tatsumi, Takashi
CORPORATE SOURCE: Shanghai Key Laboratory of Green Chemistry and Chemical Processes, Department of Chemistry, East China Normal University, Shanghai, 200062, Peop. Rep. China
SOURCE: Catalysis Today (2005), 99(1-2), 233-240
CODEN: CATTEA; ISSN: 0920-5861

PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L1 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN
AB A novel titanosilicate with the MWW topol., Ti-MWW, has been prepared by direct hydrothermal synthesis using boric acid as a structure-supporting agent, and also by post-incorporation of tetrahedral Ti species into MWW silicalite through controlled structural conversions between three-dimensional crystalline silicalite and the lamellar precursor. Ti-MWW is further converted by delamination into a thin sheet material applicable to the reaction of bulky reactants. Both direct hydrothermal synthesis and postsynthesis methods make it possible to introduce a controllable amount of Ti species into the MWW structure. An acid treatment of uncalcined samples is essentially important for the removal of the extraframework octahedral Ti species located on the exterior layer surface. The catalytic properties of Ti-MWW have been compared with those of conventional titanosilicates (TS-1, TS-2, Ti-Beta, Ti-MOR, Ti-MCM-41, etc.) in the epoxidn. of various alkenes with hydrogen peroxide. Hydrothermally synthesized Ti-MWW proves to be more effective in the epoxidn. of linear alkenes including functionalized ones, and also exhibits considerable activity for cycloalkenes. Moreover, it shows a unique shape selectivity not shared with other titanosilicates in the epoxidn. of cis/trans geometric alkene isomers. Postsynthesized Ti-MWW, nearly free of boron, catalyzes the alkene epoxidn. more effectively as a result of the tetrahedral Ti species different from those resulting from the direct synthesis, which turns out to be the most active epoxidn. titanosilicate catalyst so far. Delaminated Ti-MWW, possessing an extremely open and accessible surface area but maintaining the basic structure of zeolite, catalyzes the epoxidn. of various cycloalkenes more actively than large pore titanosilicates including mesoporous Ti-MCM-41.
ACCESSION NUMBER: 2004:378219 CAPLUS
DOCUMENT NUMBER: 141:213439
TITLE: A New Generation of Titanosilicate Catalyst: Preparation and Application to Liquid-Phase Epoxidation of Alkenes
AUTHOR(S): Wu, Peng; Tatsumi, Takashi
CORPORATE SOURCE: Department of Chemistry, Shanghai Key Laboratory of Green Chemistry and Chemical Processes, East China Normal University, Shanghai, 200062, Peop. Rep. China
SOURCE: Catalysis Surveys from Asia (2004), 8(2), 137-148
CODEN: CSAABF; ISSN: 1571-1013
PUBLISHER: Kluwer Academic/Plenum Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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